

GREENING YOUR ZONING ORDINANCE

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APA – UPPER MIDWEST CONFERENCE

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GOALS FOR A GREEN ZONING CODE

A zoning code should allow for and encourage a variety of sustainable development techniques, improving energy efficiency and taking advantage of existing resources

- From large-scale development concepts (TOD) to site-specific elements (solar PV panels, pervious paving)
- Zoning does not address green building techniques but it can require new development lessen its negative impact
- Older codes do not address this because technology didn't exist or different planning policy in place

“Green” zoning regulation should:

1. Reduce barriers
2. Set requirements
3. Create incentives
4. Enforce standards

COMPONENTS OF SUSTAINABILITY



AREAS OF FOCUS

Specific areas to focus on:

1. Accessory structures
2. Emerging principal uses
3. Local food production
4. Density
5. Site development standards
 1. Large-scale
 2. Site specific
6. Environmental regulations
7. Adaptive reuse
8. Landscape
9. Stormwater management

ACCESSORY STRUCTURES

- Ensure that code allows various “green” accessory structures
- Need to strike balance with aesthetics (example: historic preservation)
- Set standards for their siting
- Examples of accessory structures:
 - ✓ Solar PV panels, solar thermal
 - ✓ Residential wind turbines
 - ✓ Cisterns, rain barrels
 - ✓ Back-up generators
 - ✓ Location of gardens



PRINCIPAL USES

- New principal uses emerging for alternative energy
- Create standards for compatibility
- Consider “co-location”
- Need to strike balance with development policy
- Examples of new principal uses:
 - ✓ Wind farms
 - ✓ Solar farms
 - ✓ Recycling facilities
 - ✓ Geothermal plants



LOCAL FOOD PRODUCTION

- Tap into existing resources
- Create standards to permit by-right
- Issues of liability
- Consider both positive and negative economic impacts
- “Co-locate” with other uses – ex: schools
- Examples of local food production:
 - ✓ Urban agriculture
 - ✓ Community gardens (public, private)
 - ✓ Farmer’s markets/farmstands



DENSITY

- INFILL – Proper density where infrastructure & resources available
- New mixed-use districts
- Evaluate densities in districts - “match” what can be accommodated?
 - ✓ Remember parking & height realities
 - ✓ Older development policies may not reflect existing density pattern
- Implement “minimum” densities for new development types
- Density bonuses for incorporating sustainable development
- Example: Transit-oriented development
 - ✓ Implement by overlay or base district
 - ✓ Anticipate where new transit stops are to be built

SITE DEVELOPMENT

LARGE-SCALE

- Mixed-use developments, TND, TOD
- Do not limit mixed-use to residential & commercial mix
- “Complete streets”
- Building siting requirements for passive solar access
- Required open space within large developments, low-impact development
- Use PUD to negotiate sustainable development techniques
 - ✓ Require public benefits/amenities
 - ✓ Flexibility to ask for LEED/LEED-equivalent buildings
- Transit-oriented development
 - ✓ Anticipate where new transit stops are to be built

SITE DEVELOPMENT

SITE SPECIFIC

- Impervious surface requirements
- Allowing the use of pervious materials
- Parking alternatives
 - ✓ Allowed shared parking, cross-access agreements, count on-street spaces
 - ✓ Parking maximums
 - ✓ Land-banked parking
 - ✓ Prohibit parking in certain areas
 - ✓ Car-sharing incentives
- Required bike parking & bicyclist facilities
- Exterior lighting requirements – “Dark Skies”

ENVIRONMENTAL REGULATIONS

- Create specific regulations for environmentally sensitive areas (ESA) and natural resources
- Conservation Design
- ESA Overlays
 - ✓ Natural areas: wetlands, tree stands, prairies
 - ✓ Waterbodies: rivers, streams
 - ✓ Groundwater: aquifer, wellheads
- Preserve rural character
 - ✓ Scenic road overlays
 - ✓ Rural design standards
- Open space zoning – link greenway corridors
- Look at subdivision regulations

ADAPTIVE REUSE

- “Green-er” to reuse older buildings
- Evaluate whether the code encourages teardowns
 - ✓ Nonconformity flexibilities
 - ✓ Permissions for additions to existing structures
 - ✓ Excessive parking & loading requirements
 - ✓ Use flexibilities
- Eliminate variances for older structures to be reused
- Residential conversions
- Create performance standards



LANDSCAPE

- Include comprehensive landscape standards
 - ✓ Parking lot landscaping – perimeter & interior
 - ✓ Buffer yard requirements
 - ✓ Parkway tree requirements
 - ✓ Tree preservation
- Landscape regulations for sustainability
 - ✓ Stormwater management as landscape amenity
 - ✓ Encourage native, non-invasive, low water landscaping
 - ✓ Require diversity
 - ✓ A simple “BDI” requirement in the landscape regulations



STORMWATER MANAGEMENT

Stormwater management on a smaller-scale (less than 1ac)

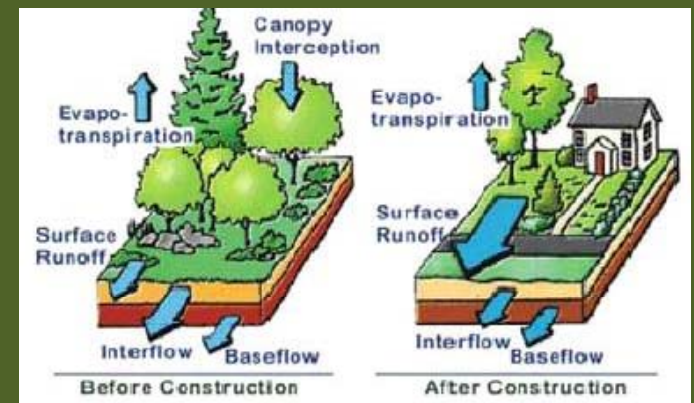
- Minimize or eliminate potable water consumption for external use
 - ✓ Plant species factor; use low-water-demanding vegetation
 - ✓ Irrigation efficiency, such as climate-based controllers
 - ✓ Use of captured rainwater or condensate water
 - ✓ Use of recycled graywater or wastewater
 - ✓ Can be both required and incentivized
- Manage water on-site
 - ✓ Minimize the reliance on traditional storm drain systems
 - ✓ Improve on-site water quality
 - ✓ Preserve or increase groundwater recharge
 - ✓ Create incentives to encourage their use or require performance standard



STORMWATER MANAGEMENT

VARIETY OF OPTIONS

- Green roofs
- Collection and reuse of greywater
- Stormwater harvesting
- Permeable paving
- Bioretention areas & bioswales
- Rain gardens
- Flow-through planters, filter strips, tree box filters
- Natural detention basin
- Soil amendments to provide infiltration capacity



CASE STUDIES

- Winnebago County, IL
- Baltimore, MD
- New Orleans, LA

WINNEBAGO COUNTY, IL

Unified Development Ordinance

Land Use Policy

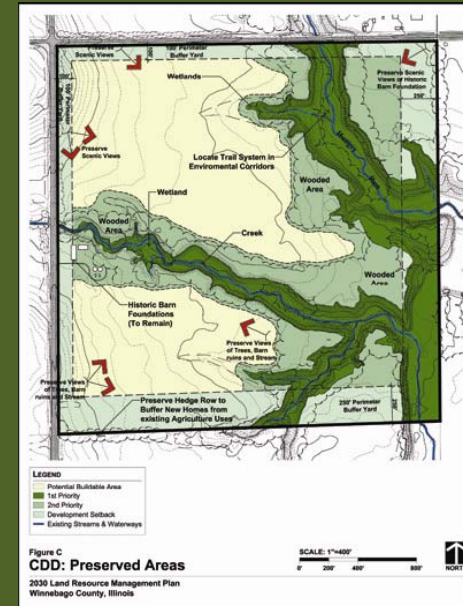
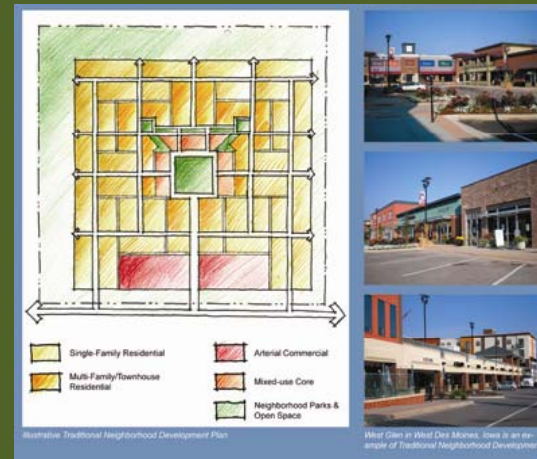
- Link to Land Resource Management Plan (ASLA Award for Environmental Stewardship)
- Direct residential to built out areas
- Preserve agriculture
- Reserve industrial areas

Environmental Sensitivity

- Conservation Design
- Traditional Neighborhood Development
- Scenic Roadway District
- Environmentally Sensitive Areas Overlay
- “Green” uses & accessory structures

Stormwater Management

- Floodplain ordinance
- Landscape requirements
- Performance standards for riverways



BALTIMORE, MD

Zoning Code

Preserve Historic Character

- Compatible infill development in neighborhoods
- Adaptive reuse of existing structures
- Residential conversions

Redevelopment

- Transit-Oriented Development
- Preserve industrial areas
- Waterfront access & protection

Sustainability & Environment

- Environmentally sensitive areas development
- “Green” accessory structures
- Alternate modes of transportation
- Working with Dept. of Public Health & Sustainability Commission



NEW ORLEANS, LA

Zoning Ordinance

Placemaking

- Address the different eras of development in New Orleans – “8 places”
- Design standards for new development in character with “place”
- Match to existing densities
- Reflect development constraints

Sustainability

- Stormwater management
- Preservation and restoration of wetlands
- Preserve environmentally sensitive areas
- Tree preservation – live oaks
- Significant bike standards
- New “green” uses



COMPONENTS OF SUSTAINABILITY



ENVIRONMENTAL



ENVIRONMENTAL

- Renewable energy technologies - solar panels, residential wind turbines
- Parking design
- Alternative modes of transportation, including bicycles, pedestrian and public transit
- Regulations that protect natural resources (districts and standards)
- Conservation Design Districts
- Stormwater management requirements – general and targeted around water resources
- Site plan review standards include the environment and sustainable development

ECONOMIC



BALTIMORE



NEW ORLEANS



WINNEBAGO CO.

ECONOMIC

- New districts for specific large-scale development types including TOD, TND and mixed-use
- Adaptive reuse of historic structures
- Parking flexibilities
- Matching densities
- Mixed-use
- Local food production
- New principal uses: wind farms, solar farms, recycling facilities

SOCIAL



BALTIMORE



NEW ORLEANS



WINNEBAGO CO.

SOCIAL

- Incorporating public health policies
- Permissions for residential conversions
- Regulations that preserve neighborhoods
- CPTED standards for development approval

SUSTAINABILITY AUDIT

Review the municipality's current regulations against the areas of sustainability.

Create a two-phase process for update:

PHASE 1

- Municipality's goals for the project
- How the current ordinance functions
- Municipality's capacity to administer new regulations
- Municipality's concerns
- Citizen goals & concerns
- Consensus in approaches & values

PHASE 2

- Present options & educate the public
- Draft & test new regulations from a legal, administrative and "understandability" point of view
- Inform & guide administrators & public through regulatory applications & implications
- Finalize regulations
- Adopt an ordinance that reflects municipality's goals & values

EDUCATION & OPTIONS

Example: Solar Panels vs. Trees

- “Homeowner blue” has existing trees or plants new trees at their property’s edge
- “Homeowner yellow” mounts a solar energy
- How does the municipality resolve this conflict?

The municipality can approach this issue a few ways

- Dispute can be settled by the homeowners
- Establish a “Solar Access Easement”
- Create setback and siting regulations for new solar panels
- Create regulations similar to the California Solar Shade Control Act



PROCESS DETERMINES OUTCOME

It is the public process, and the municipality's established goals and values, that will determine the proper regulations.

Consultant and/or municipality's job is to present the options, educate the public, and build community consensus on the approach.

THANK YOU

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